

Alg1Lesson31Plan

Monday, November 23, 2015 12:30 PM



Alg1Lesson31Plan

Algebra I
Unit 2
11/23-24/15

Lesson 31 – Region

Learning and Social Objective(s)

1. Students will be able to graph a linear inequality in two variables.
2. Students will be able to determine whether an ordered pair is a solution to a linear inequality in two variables.
3. Students will be quiet while the teacher or a peer is talking.

Agenda [106 minutes]

1. Warm-Up 31 [10 min]
2. Apple Word/Objectives [5 min]
3. Review Lesson 30 [15 min]
4. Lesson 31 Guided Notes [60 min]
5. Wrap-Up/Unit 3 Project [10 min]

Apple word

- ↳ Region: an area that has definable characteristics.

Teacher Examples

Classwork 31 (Due 11/30/15)

- ↳ Lesson 31 Guided Notes Classwork #1-4

CFU

- ↳ Class Response (Recital), Individual Whiteboards

Homework 31 (Due 11/30/15)

- ↳ Lesson 31 Guided Notes Homework #1-4

Name:

Class Period:

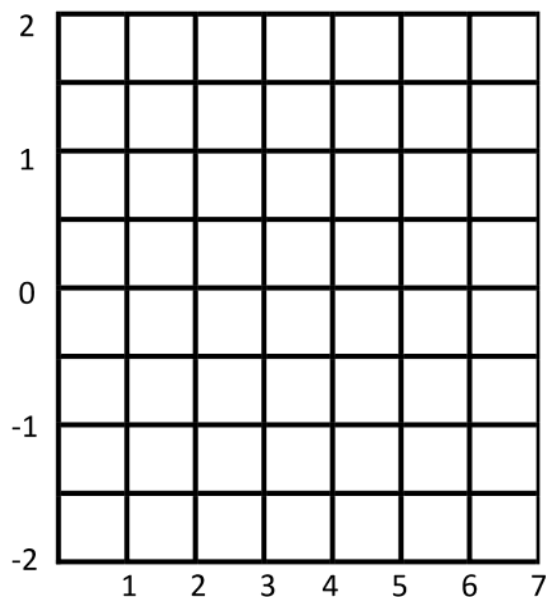
Lesson 31 Guided Notes

Warm-Up 31

Directions: Complete problems below and be prepared to share your answers. If you finish early, write down today's classwork and homework from the Daily Bulletin and then start working on the review on the next page.

1.) Write $2x + 3y = 6$ in slope-intercept form.

2.) Graph the equation from problem 1 below.



Review of Inequalities

Math Symbols

Directions: Complete the table below by matching the phrases with the appropriate symbol. Symbols can be used more than once.

Phrase	Symbol
"at least"	
"at most"	
"less than or equal to"	
"greater than or equal to"	
"no more than"	
"no less than"	

Math Sentences

Directions: Fill in the blanks below with the correct word.

- 1.) An _____ is a statement that instead of an = has one of the following symbols: $>$, $<$, \geq , or \leq .
- 2.) When graphing a linear equation in Slope-Intercept Form, students should first plot the _____ on the graph.
- 3.) After plotting the first point, students should plot a second point based on the equation's _____.
- 4.) Lastly, students should use a straightedge to draw a _____ that connects the _____ points.

Key Notes

The following are the steps for to graph an inequality.

Step 1: Rewrite the inequality to resemble Slope-Intercept Form.

$$y = mx + b$$

Step 2: Plot the y-intercept.

$$(0, b)$$

Step 3: Plot a second point based on the slope.

$$\rightarrow \Delta x, \updownarrow \Delta y$$

Step 4: Draw the correct type of line to connect the two points.

Symbol	Type of Line	Direction to Shade
$>$	Dashed ---	Above \uparrow
\geq	Solid —	Above \uparrow
$<$	Dashed ---	Below \downarrow
\leq	Solid —	Below \downarrow

Step 5: Shade the correct direction.

Teacher Example

Directions: Graph the inequality $2x - y \geq -3$.

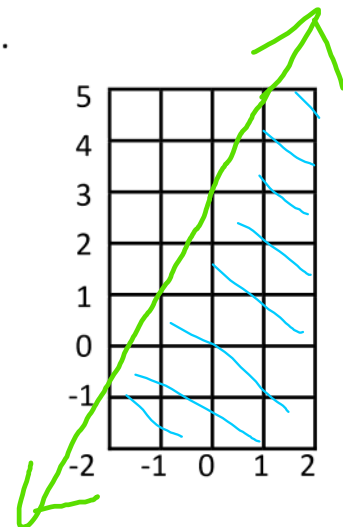
$$\begin{array}{r} \cancel{2x} - y \geq -3 \\ \underline{\cancel{-2x}} \qquad \underline{\cancel{-2x}} \end{array}$$

$$\begin{array}{r} \cancel{-y} \geq \cancel{-2x} - 3 \\ \underline{\cancel{-1}} \qquad \underline{-1} \end{array}$$

$$y \leq 2x + 3$$

Mr. Turner

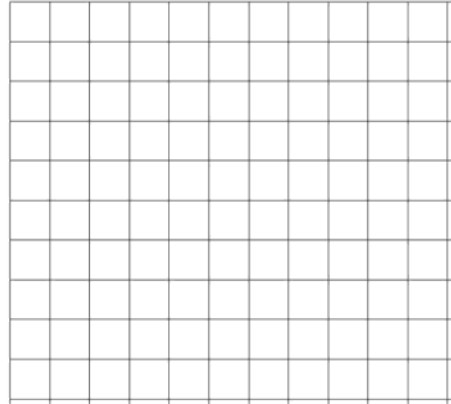
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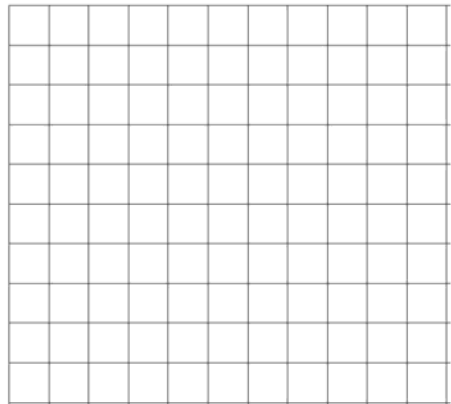
Algebra I

Classwork 31

1.) Graph the inequality $3x - y \leq -2$.



2.) Recall the equation in the warm-up: $2x + 3y = 6$. Suppose this linear equation was “greater than or equal to” instead of “equal to.” Rewrite the equation as an inequality below and then graph it.



Key Notes

The following are the steps for testing whether an ordered pair is a solution.

Step 1: Plot the ordered pair on the graph.

(x, y)

Step 2: Use the type of line or shading to determine whether it is a solution.

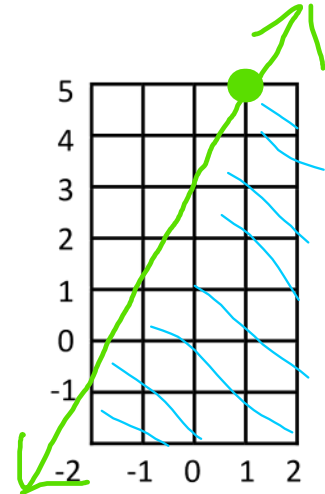
Solution	On Type of Line	In Region
YES	Solid —	Shaded
NO	Dashed - - -	Non-shaded

Teacher Example

1.) Directions: Is $(0, 3)$ a solution to the inequality to $2x - y \geq -3$?

$$y \leq 2x + 3$$

Yes



Classwork 31

3.) Is (2, 1) a solution to the inequality from problem 1?

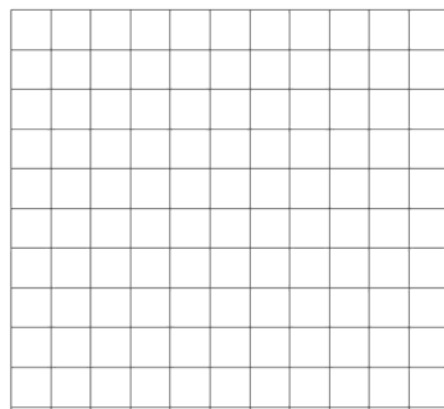
NO

4.) Is (3, 2) a solution to the inequality from problem 2?

YES

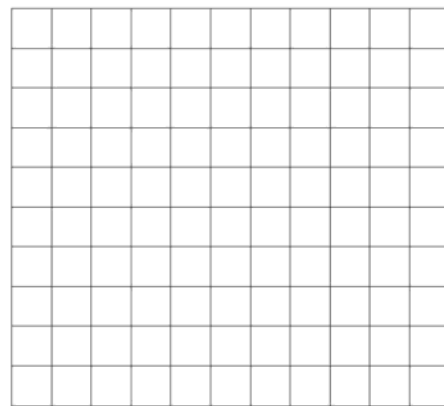
Homework 31

1.) Graph the inequality $4x + y \geq 5$.



2.) Is (0, 4) a solution to the inequality from problem 1?

3.) Graph the inequality $-2y > 6 + x$.



4.) Is (2, 1) a solution to the inequality from problem 3?